



Discussion of Solid Waste Management Strategies

Board of County Commissioners
October 24, 2007

Presented by: Frederick County Division of Utilities and Solid Waste Management (DUSWM)

Solid Waste Issues

- ➔ In March 2000, the BoCC reorganized the County's Division of Public Works, creating the Division of Utilities and Solid Waste Management (DUSWM).
- ➔ The new DUSWM became responsible for the management of the County's water, wastewater and solid waste disposal enterprises.
- ➔ The new Division had to immediately address several unanticipated solid waste problem, including the discovery that that the Reich's ford Road landfill capacity would be exhausted by April 2008.
- ➔ The DUSWM recommended that an independent consultant evaluate the DUSWM's landfill capacity calculations, and;
- ➔ Review and recommend appropriate changes, if necessary, to the County's Solid Waste Management practices.

Solid Waste Issues

- ⇒ The Board decided to hire two independent consultants to evaluate the County's solid waste disposal capacity problems.
- ⇒ The consultants confirmed the existence of the disposal capacity problem. They determined that the remaining permitted cells of the Site B landfill would be exhausted by 2008, approximately 10 years earlier than what had been originally anticipated.

Solid Waste Issues

- ⇒ Based on these consultants recommendations the BoCC approved and pursued a strategy which included the following major elements:
 - Optimize the existing landfill capacity, through redesign of the disposal cells 2 and 3
 - Increase the overall landfill capacity through an increase in height and side slope grade.
 - Secure long-term waste disposal capacity in landfills outside the County and construct a transfer station to facilitate waste transfer operations.

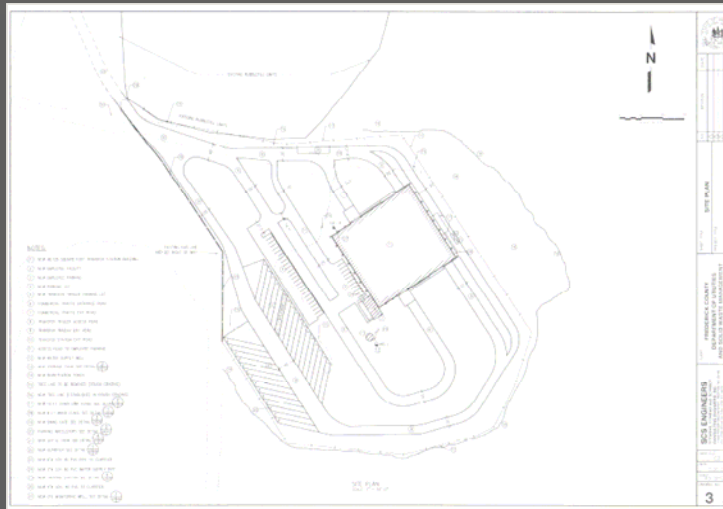
Solid Waste Issues

- ➡ The modified liner design for the landfill cells 2 and 3 increased the amount of landfill capacity by approximately 129,000 cubic yards or the approximate equivalent of 75,000 tons of disposal capacity.
- ➡ In March 2003 the DUSWM requested a permit modification to allow for a vertical expansion of the Site B landfill and to increase the landfill's design side slope from 4:1 to 3:1. The MDE approved the new permit in May 2007, however, the permit is currently being contested by several local citizens.
 - By increasing the height of the landfill, approximately 2 million cubic yards of additional waste disposal capacity can be provided.

Solid Waste Issues

- ⇒ In April 2005 the County entered into a long-term waste transportation and disposal contract with Waste Management Incorporated. The base contract provides the County with out-of-state landfill capacity and waste transportation services until 2011.
 - The base contract with the 4 one (1) year unilateral renewals allows the County to continue to transfer waste to out-of-state landfills until 2015.
 - The permitting of the Solid waste transfer station was somewhat protracted due to certain legal challenges, necessitating the use of temporary landfill working face transfer operation, which was established in December 2005.
 - Earlier this year, after prevailing in a final legal challenge, the County awarded the construction of the transfer station. It is currently under construction and will be completed by July of next year.

Interim Waste Transfer Station



The transfer station, which will be completed and operational by mid 2008, will provide 40,000 Sq. Ft. of space to conduct both MSW and single stream recycling transfer operations.

With the transfer and processing facility in place the County will be able to expand its recycling program to include a single stream recycling options.



Solid Waste Issues

Solid Waste Legislative Initiatives

- ➡ Since 2003 the DUSWM has been pursuing multiple initiatives to assist the County in the development of long-term structural and financial solutions which will allow the County to better manage its solid waste programs.

Solid Waste Issues

⇒ Legislative Initiatives

- Enabling Legislation allowing the County to become a participating jurisdiction in the Northeast Maryland Waste Disposal Authority (NMWDA).
- Enabling Legislation allowing the County to develop and assess a solid waste System Benefit Charge to provide supplemental sources of funding for the solid waste enterprise.
- Enabling Legislation, which would have allowed the County to institute a bottle deposit.

Solid Waste Issues

- Enabling Legislation, which would have allowed the County to institute a bottle excise tax.
- Enabling Legislation, which would allow the County to award franchises for the collection of solid waste.

Solid Waste Issues

- ➔ During the 2004 legislative session the County received the necessary enabling legislation to become a member of the NMWDA. In October 2004 the County formally became the eighth jurisdiction to of the NMWDA. The NMWDA has provided the County with significant resources and assistance as it pursues both interim and long-term solid waste management solutions for the County.

Solid Waste Issues

- ➡ Also during the 2004 legislative session the County received the authority to levy a Solid Waste System Benefit Charge (SBC) to help fund the County's solid waste enterprises services to the residents.
 - The SBC was introduced beginning in FY 2007 (July 1, 2006). The funding provided through the SBC has allowed the County to continue recycling and waste management programs without burdening the General Fund, while keeping tipping fees at a competitive rate.

Solid Waste Issues

- ➡ The BoCC has also considered legislation, which would have allowed the County to impose a mandatory beverage container excise tax and a beverage deposit return system.
 - During 2006 legislative session the County again pursued a Beverage Container Excise Tax.
 - During the upcoming (2008) Legislative Session the BoCC is pursuing a Mandatory Beverage Container Deposit return system.
 - Revenue from these types of programs, if ultimately approved, could be used help fund the County's recycling programs.

Solid Waste Issues

- ➡ During the 2006 and 2007 legislative session the BoCC pursued enabling legislation to allow the County to grant exclusive franchises for the collection of solid waste.
 - Such arrangements provide important collection efficiencies and reduce the number of collection vehicles traveling on the community's roads.
 - Franchises could help the current haulers improve waste collection efficiencies and reduce truck traffic on the roads.

Solid Waste Issues

- Waste collection franchises would have other collateral benefits, including the establishment of uniform waste (trash) collection with a corresponding curbside recycling collection.
- The County is pursuing the enabling legislation to be able to establish waste collections franchises again this year.

Solid Waste Issues

- ➡ In concert with these initiatives, the DUSWM has for the last seven years, focused primarily on sustaining the established solid waste and recycling programs as an enterprise operation, preventing it from becoming a long term burden on the General Fund. These efforts have for the most part been successful. The County's recycling programs have been preserved and in some cases expanded as available funds permitted.

Solid Waste Issues

- ➔ Stabilizing and balancing the Enterprise's fiscal considerations, while establishing sustainable service levels has not been easy and in some cases has prevented the County from expanding or developing other solid waste programs, which would enhance service levels.

Solid Waste Issues

- ⇒ After discovering the landfill capacity problems, the County decided to establish an interim solution, which relies on the transfer of solid waste to out of state landfills. Although this interim solution has ensured that the County has a functional waste disposal system, it may not be sustainable in light of escalating costs and the need to secure capacity in increasingly more distant out of state landfills.

Solid Waste Issues

- ➡ The current transportation and disposal contract, with its four-one-year extensions will expire in 2015. At that time, if the County has not established an alternative waste disposal system, it is likely that the County will need to secure landfill capacity in states more distant than Virginia.
 - By 2015 if the County continues to transfer its solid waste out of state it will most likely go to large mega landfills in North and South Carolina, or possibly Georgia.

Solid Waste Issues

- ➡ On February 16, 2006 the BoCC, after considering the information contained in Solid Waste Management Options report, prepared by R.W. Beck, adopted resolution 06-05 Waste to Energy Disposal Facility.
 - Among other things, this action directed the DUSWM and the NMWDA to conduct a procurement for waste to energy facilities, negotiate a service agreement with the highest ranked proposer, and to present the contract to the Commissioners on or before December 1, 2006.

Solid Waste Issues

- ➔ Should the BoCC decide to pursue a local or regional WTE facility, or for that matter some other option such as locating and constructing a new sanitary landfill in Frederick County, there are several complementary recycling and waste diversion strategies which should be implemented regardless of the long term waste disposal options selected.

Solid Waste Issues

- ➡ The underlying goal of these strategies is to work towards a truly integrated waste management system, which includes the necessary infrastructure, programs, and funding to ensure reliable environmentally safe and economical recycling and waste disposal for the County's residents.

Recycling Programs (History)

- ⇒ Frederick County initiated its recycling program in 1990 by providing the first drop off center at the Reich's Ford Road Landfill.
- ⇒ In 1991 a mobile satellite collection program was started in Brunswick, Thurmont, Myersville, and Emmitsburg.
 - Initially County staff collected and marketed the materials.
 - Later in the same year the County executed a contract with Browning Ferris Industries (BFI) to establish a satellite-recycling program.

Recycling Programs (History)

- ➡ In 1991 a contract with BFI was established for a pilot curbside pickup in southern Frederick City, Walkersville, and Woodsboro servicing 4,000 households.
- ➡ In 1992 the contract with BFI was renewed and expanded and by 1994 this contract was again expanded again providing service for a total of 34,000 households.
- ➡ The program has continued to expand. Today approximately 53,000 residences have access to the County's curbside recycling collection program.

Recycling Programs (History)

- ➡ Frederick County's current recycling rates are substantially greater than the State's mandated 20% value. They are also higher than the national average of 31%.
 - Based on calendar year 2006 data Frederick County's MRA rate of 36.02% and its Waste Diversion Rate of 39.02% ranked 12th out of the 21 Maryland jurisdictions which MDE basis its report upon.

Recycling Programs (Current)

⇒ For Comparison:

- Montgomery County, Maryland ranked 10th based on its Waste Diversion Rate of 42.47%; it ranked 11th for its MRA rate of 37.47%.
- Washington County ranked 17th at 28.88% MRA rate and 17th for its Waste Diversion Rate of 29.88%.
- Carroll County ranked 18th for both its 27.72% MRA rate and 29.72% Waste Diversion rate.

Maryland Jurisdictional Recycling Rates (Calendar Years 2005 and 2006)*				
	2005		2006	
	MRA**	Waste***	MRA**	Waste***
County or Jurisdiction	Rate	Diversion Rate	Rate	Diversion Rate
Allegany	27.49	29.49	29.10	32.10
Anne Arundel	43.16	46.16	46.26	49.26
Baltimore City	34.76	34.76	42.04	42.04
Baltimore Co.	46.39	51.39	45.25	50.25
Calvert Co.	46.57	49.57	49.85	51.85
Carroll Co.	34.33	38.33	27.72	29.72
Cecil Co.	17.14	18.14	35.40	37.40
Charles Co.	43.43	48.43	39.68	44.68
Dorchester Co.	27.46	27.46	18.32	18.32
Frederick Co.	34.30	36.30	36.02	39.02
Garrett Co.	45.96	46.96	51.13	52.13
Harford Co.	52.06	56.06	52.80	56.80
Howard Co.	40.35	45.35	42.28	47.28
Midshore	47.01	47.01	48.29	48.29
Montgomery Co.	33.43	38.43	37.47	42.47
Prince Georges Co.	39.95	43.95	41.03	46.03
Somerset Co.	45.81	45.81	27.50	27.50
St. Mary's Co.	29.83	33.83	31.93	35.93
Washington Co.	17.75	18.75	28.88	29.88
Wicomico Co.	26.01	26.01	20.59	20.59
Worcester Co.	32.85	32.85	32.00	32.00
*Source: Maryland Department of the Environment				
**MRA = Maryland Recycling Act				
***Waste Diversion Rate = Recycling Rate + Source Reduction Credit				

Recycling Programs (Current)

Frederick County offers no-fee curbside residential recycling collection to approximate 53,000 of the 71,151 single family and townhouse residential properties in the County.

This curbside service is typically provided for residential properties in the more densely populated part of the County and in some cases along the collection routes between these areas.

Recycling Programs (Current)

- ➡ The County also provides recycling drop of centers for those residential properties that do receive curbside service.

Recycling Programs (Current)

- ➡ In FY 2007, the County's cost for this program was \$ 1,552,119 on collection and processing, which includes material revenues. Allied Waste provides the collection, processing and marketing services.

Recycling Programs (Current)

- ⇒ The type of materials which can be accepted is determined by the processing facility's ability to market the material. For the next several years, these include:
 - **Mixed Paper:** (newspaper, office paper, books, magazines boxboard and junk mail)
 - **Corrugated Cardboard**
 - **Glass Bottles**
 - **All Plastic Bottles**
 - **Steel and Aluminum Cans**

Recycling Programs (Future)

Curbside Recycling Strategy

- ⇒ As the DUSWM has indicated in the past, increasing curbside participation rates can be achieved through by conversion to single stream recycling collection.
 - Single stream collection is dependent upon the completion of the County's new transfer station and securing new single stream recycling collection contracts.

Recycling Programs (Future)

- ⇒ Other jurisdictions have experienced significant increase in their curbside recycling rates by converting to single stream collection.
 - The use of larger 64-gallon containers will provide more storage volume for recyclables between collections, allowing bi-weekly collection.
 - As volumes increase the program can expanded to weekly collection.
 - Or if necessary to accommodate increased individual household recycling larger recycling totes up to 95 gallons could be provided before a the County increases collection frequency to one per week.

Recycling Programs (Future)

- ➡ Bi-weekly single stream collection has the advantage of giving more residents access to the curbside program while minimizing the collection costs.

Recycling Programs (Future)

- ➡ The DUSWM is in the process of preparing the bid documents for the new single stream collection contract and we are recommending that the procurement of these services include:
 - Pricing for bi-weekly collection with the contractor providing a 64 gallon wheeled tote specific by the County, with optional pricing for 75 and/or 95 gallon totes.

Recycling Programs (Future)

- Pricing for weekly collection with the contractor providing a 64 gallon wheeled tote specified by the County, with optional pricing for 75 and 95 gallon totes.
- Pricing for bi-weekly collection with the County providing the wheeled totes (priced Fixed Regardless of Size 64 gallon to 95 gallon).
- Pricing for weekly collection with the County providing the wheeled totes (priced Fixed Regardless of Size 64 gallon to 95 gallon).

Recycling Programs (Future)



- ➔ The use of 64 gallon and larger wheeled recycling totes will increase the amount of material that a resident can store between pick-ups. Larger families and avid recyclers could be issued larger totes if needed.

Recycling Programs (Future)

- ➡ The DUSWM recommends that the municipal collection areas be established as separate recycling collection routes so that municipalities can opt out of using the County's single stream recycling collection contract in favor of using their own existing contractor for both waste and recycling collection.
 - This may help some of the municipalities' increase their recycling rates while decreasing waste tipping fees through their own enforcement of any local mandatory recycling laws.

Recycling Programs (Future)

- ➔ Involving the municipal governments in the process of diverting recyclables away from the expensive waste disposal stream (FY 2009 Tipping Fee \$74/Ton) and into much less expensive single stream recycling, has the potential to not only increase municipal recycling rates but also reduce the Cities' and Towns' waste disposal costs

Recycling Programs (Future)

- ➡ Since the municipal governments may be in the best position to establish and enforce mandatory recycling laws within their jurisdictions, the municipalities in the county should seriously consider such action once the County's single stream recycling transfer facility is operational.

Recycling Programs (Future)

- ⇒ By using a bi-weekly collection schedule and larger recycling containers the collection cost per household should stabilize or even decrease allowing for a possible County wide expansion of the residential curbside recycling program.
 - Cost to accommodate weekly collection in the incorporated areas, if it is deemed necessary could be funded by the municipalities or through an increase in the County's SBC.

Recycling Programs (Future)

- The DUSWM would only recommend increasing the collection frequency, and then only to those areas where it is needed, if residents recycling rates increase beyond the capability of the 64 to 95 gallon totes.

Recycling Programs (Future)

Multifamily Residential Recycling Strategy

- ➔ There are approximately 12,760 multi-family residential properties in Frederick County. As mentioned earlier, other than the 12 recycling drop off locations, the County does not currently provide recycling collection services for multi-family residential properties.

Recycling Programs (Future)

- ➡ As the County transitions to the single stream curbside collection and replaces blue bins with totes, several thousand blue bins will become available, which can be used to help start multi-family residential recycling programs, which would be sponsored by the owner of the multi-family property.

Recycling Programs (Future)

- ⇒ Conceptually, this program would rely on mandating that all multifamily residential properties located within Frederick County provide an appropriate sized single stream recycling container for use by the residents of the property. Typically this would take the form of a 4 to 8 yard dumpster, which would be provided by the property management organization or the owner of the apartment building.

Recycling Programs (Future)

- ➡ With or without municipal or County mandates for multifamily recycling, with the advent of single stream recycling transfer opportunities, once the County's transfer station is operational, owners of multifamily properties may be able to reduce their waste disposal costs by providing single stream recycling to their residential complexes.

Recycling Programs (Future)

- The large difference in cost between waste disposal at \$74 per ton and projected single stream transfer handling costs of \$15 per ton, adequate economic incentive should exist to ensure that these services are provided by the owners of these types of residential properties. If necessary the County may be able to mandate these requirements by ordinance.

Recycling Programs (Future)

- ➡ To ensure that a larger more aggressive residential recycling collection program can be managed correctly it will be necessary to add a dedicated Residential Recycling Specialist to provide program management and monitoring.

Yard Waste/Compost Processing

Yard Waste Processing/Compost Facility.

- ⇒ Frederick County's existing yard waste processing operation accepted and recycled over 21,440 tons of organic waste (leaves, grass, and brush) in Calendar Year 2006.
 - These services are provided at three locations: Reich's Ford Road Landfill, Walkersville (Heritage Farm Park), and the City of Frederick.

Yard Waste/Compost Processing

- ➔ There is currently no charge for dropping off yard waste and the mulch is made available to residents and businesses at no charge.
 - Much of the product is currently being hauled off-site by large, wholesale, retail companies specializing in selling organic material such as mulch and compost. Sufficient quantities are kept on site to ensure mulch is available to residents on most occasions.

Yard Waste/Compost Processing

- ➔ The DUSWM is planning to expand it's current operation with a windrow composting operation and create an additional organic compost product similar to LeafGro™ made in Dickerson Maryland for Montgomery County.
 - With the proper composting facility in place, and product refinements already planned, the DUSWM will be able to produce two refined organic products which could be marketed to help off-set a portion of this program's costs.

Yard Waste/Compost Processing



- ⇒ Once the windrow composting operation is in place, it may also facilitate additional recycling activities specifically geared towards food waste composting.

Yard Waste/Compost Processing

- ➔ The DUSWM is currently gathering information on the possibilities of a food waste composting pilot which could serve selected grocery stores and restaurants with a more economical alternative for their food waste then disposal.



Yard Waste/Compost Processing

- ⇒ Yard waste processing and windrow composting operations will divert a large amount of waste from the disposal stream. However, these operations are expensive and compete for the Enterprises available funding.
 - The DUSWM believes that the yard waste recycling program could generate revenue. With proper marketing the compost and mulch can be sold, partially off-setting program costs.

Yard Waste/Compost Processing

- ➔ Fees could be charged for both disposal and for the purchase of the final products.
 - In many areas of the County these types of front-end yard waste tipping fees are set at a level half or less than the prevailing MSW tipping fees.
 - The tipping fees in conjunction with the sale of the higher quality mulch and compost products may ultimately allow this operation to be self funded, freeing up other solid waste revenues for other recycling programs.

Yard Waste/Compost Processing

- ➡ In order to chart a path for the future of our yard waste-recycling program the DUSWM recommends that we secure the services of a consulting firm that specializes in organics recycling and marketing.
 - If acceptable to the BoCC the DUSWM would like to proceed forward this year with securing these services, possibly using any savings from other programs.

Commercial Recycling

⇒ Commercial Recycling Services

- Once the Frederick County Transfer Station opens, the two-tier disposal price (lower for recyclables, higher for MSW) will provide an economic incentive for recycling, providing the best environment to promote more aggressive commercial recycling efforts.

Commercial Recycling

- ⇒ In several of the Countries, which we visited in Europe, the waste management programs included staff who specifically promote commercial recycling and waste diversion by working with business and manufacturing operations to assist them in finding recycling and diversion opportunities.
 - To provide assistance in this area we believe that we should add an additional position to the recycling operation, which focus solely on commercial recycling opportunities.

Recycling in the Schools

Recycling in the Schools

- ⇒ A comprehensive recycling program for the school system would not only reduce the volume of material the schools (County) will pay to send to the transfer station or landfill, but could result in significant cost savings.
 - Additionally, a comprehensive in-school recycling program would provide a hands-on opportunity for students to learn the value of recycling. Since recycling education began, classroom recycling lessons have resulted in a new generation of recyclers.

Recycling in the Schools

- ➔ Since education will be critical to expanding and developing new recycling initiatives, The DUSWM believes that it may be appropriate to also establish a specific position of Recycling/Outreach Specialist to conduct recycling education, which could focus on providing both general and targeted recycling education for all waste generation sectors.

DUSWM Recommendations

- ➔ To summarize, the DUSWM recommends that the BoCC consider the following program strategies to enhance our current levels of recycling.
 - Transition to single stream recycling beginning in FY 2009 and expand the residential curbside collection program to include all single family (and townhouse) residential properties.
 - Provide each property with a 64 gallon wheeled recyclables tote.

DUSWM Recommendations

- Program collection for bi-weekly (every two weeks) to minimize collection cost and truck traffic.
- Publish an annual recycling calendar, that will be initially delivered with tote, which will help ensure residents don't forget their particular collection day and also provide important recycling tips for the home.
- Where necessary use larger containers, up to 95 gallons for families that need more storage volume between the bi-weekly pick-ups.

DUSWM Recommendations

- Include weekly recycling collection rates in contract bid so that the collection frequency can be increased if it is deemed appropriate as recycling rates and volumes increase.
- Fund a new Residential Recycling Specialist position that will focus on monitoring the residential elements of the single stream recycling programs, including but not limited to:
 - monitoring of residential collection program
 - managing distribution of totes
 - determining when larger totes or increased collection frequency will be needed.

DUSWM Recommendations

- Once County wide residential single stream services are in place including the multifamily concept, consider scaling back or eliminating the use of the residential recycling drop off centers.

DUSWM Recommendations

With the opening of the new transfer station in FY 2009 establish a low tipping fee to cover the cost of handling all materials that can be processed through the County's contract single stream recycling center.

DUSWM Recommendations

- ➔ Consider any necessary changes to the County's zoning ordinance and or DUSWM design guidelines to require all multi-family residential and non-residential properties to have adequately sized dedicated space for deploying single stream recycling containers based on property use and size.

DUSWM Recommendations

- ➔ Expand single stream recycling to multifamily residential properties, which may potentially add an additional 12,000 residences to the single stream program. To keep cost down and to provide appropriate sized containers, use salvaged blue bins from new single stream curbside collection program, and require property owners to provide single stream dumpsters for their tenants use.

DUSWM Recommendations

- ➡ Fund a new Commercial Recycling Specialist position, which will work with the non-residential sector to take advantage of waste diversion opportunities and to assist in them in capitalizing on the single stream recycling capabilities, particularly as it relates to office paper and cardboard.

DUSWM Recommendations

- ➔ Expand the yard waste recycling program to include high quality compost and, with MDE approval conduct a food waste composting pilot project to determine the feasibility of developing a source separated consumer food waste composting facility.

DUSWM Recommendations

- ➔ Establish fee schedule for the higher quality compost and mulch processed at the Reich's Ford Road landfill to help offset the cost of this program.
 - Establish a tipping fee, lower than the MSW rate, for yard waste and potentially source separated food waste with the goal of making this program self supporting.
 - Continue to provide some free single grind mulch products at the Walkersville Heritage Park yard waste disposal facility.

DUSWM Recommendations

- ➡ Continue to provide yard waste grinding services to the City of Frederick but request that they expand the collection of these waste to the City's residents to help increase yard waste diversion.
- ➡ If source separated food composting pilot is successful, expand program as resources and infrastructure allows.

DUSWM Recommendations

- ⇒ Increase recycling awareness and help deploy programs in the County's public schools, colleges, and universities.
 - Fund a new Recycling Education and Outreach Specialist position, which will work with the BOE, FCC and the private colleges to integrate recycling and waste diversion concepts into their particular education curriculum.

DUSWM Recommendations

- Through the Recycling Education/Outreach Specialist provide assistance to the BOE, FCC, and the private colleges in the County to develop recycling and waste diversion programs for these institutions.
- Investigate the possibility of developing smaller distributed composting programs at the colleges (or even the public schools).

DUSWM Recommendations

- ⇒ Establish realistic recycling goals and be prepared to fund the programs that will increase program participation. Recognize that there are real world limits to the amount of waste that is recyclable; recover energy from that which cannot be recycled.

DUSWM Recommendations

- Develop and integrated waste management approach that uses EPA's waste disposal hierarchy.



DUSWM Recommendations

- Put in place the necessary programs and infrastructure to achieve and sustain an ultimate waste diversion goal of 60%.
 - Be prepared to increase the SBC and of tipping fees to fund recycling initiatives.
 - Establish intermediate recycling goals, and review progress annually.
 - Insure that recycling and waste disposal systems are complementary and have adequate capacity to serve the growing community.

DUSWM Recommendations

➔ The DUSWM believes that the following Waste Diversion Rate goals represent aggressive but attainable increases in the County's recycling rates.

- Calendar Year 2010 - 45%
- Calendar Year 2013 - 50%
- Calendar Year 2016 - 54%
- Calendar Year 2019 - 57%
- Calendar Year 2022 - 59%
- Calendar Year 2025 - 60%

DUSWM Recommendations

- ➔ The DUSWM seeks the BoCC's guidance on these concepts, particularly those that are related to the proposed residential curbside recycling collection programs, the increased recycling staffing recommendations, and the use of a consultant to help evaluate modifications to the current yards waste recycling program as well as deployment of a source separated food waste composting facility at the Reich's Ford Road landfill.

Interim Waste Transfer Station

- ➔ Until the transfer station and processing facility is constructed and operational, the DUSWM is conducting waste transfer operations on top of the Site B landfill to conserve the remaining capacity of the disposal cells.



Landfill Cell 3 Construction

➔ Landfill Cell 3 Construction

- The last remaining permitted disposal cell at the the Reich's Ford Road Site-B landfill was completed in August 2006.
- This cell has a total waste disposal capacity of 691,000 tons of waste material.
- Filling of cell 3 began in May 2007.
- The goal is to limit the average daily rates of disposal to approximately 50 tons per day, while transferring the remaining waste (approximately 750 TPD) to Virginia landfills where we have contract disposal capacity.

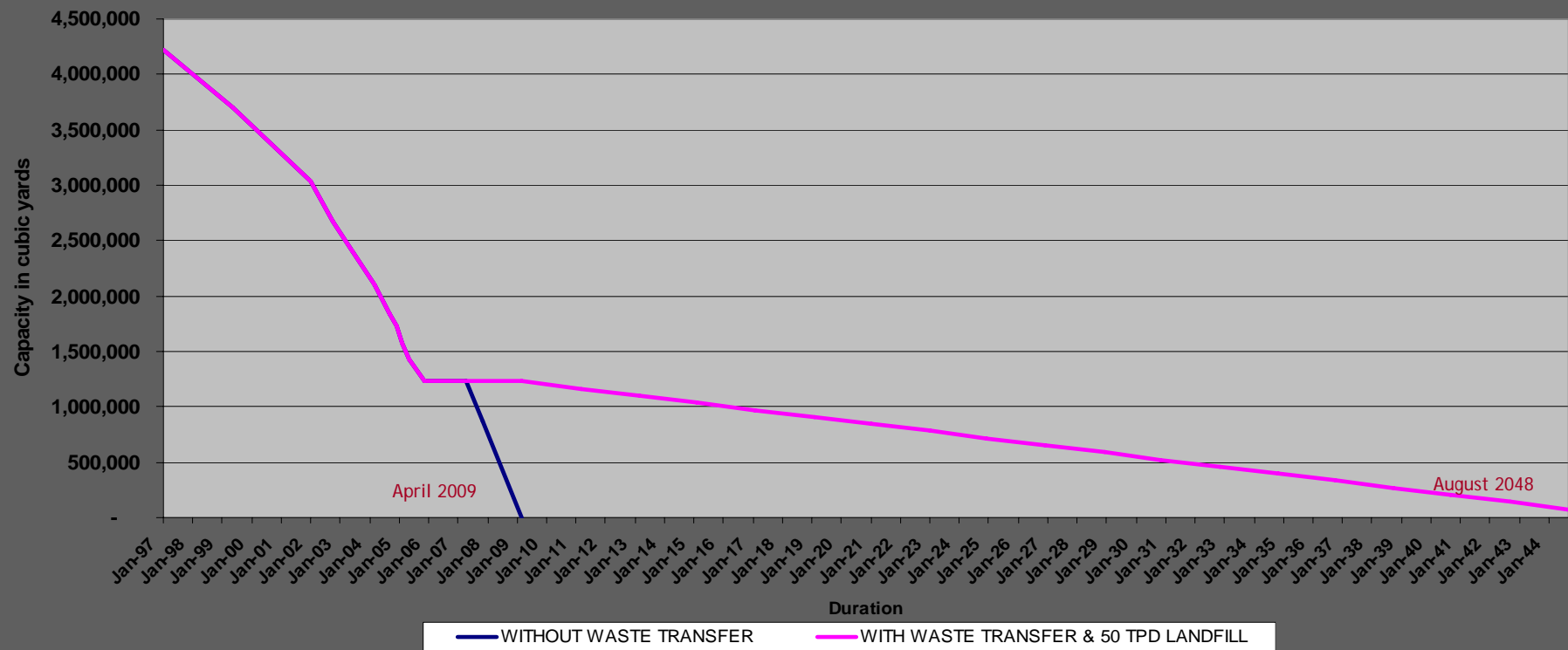
Landfill Cell 3 Construction



- The final remaining disposal cell (Cell 3) was completed in August 2006.
- Without the waste transfer operation this cell would be full in less than 2 years .

Landfill Cell 3 Capacity with Transfer

Estimated Longevity (Capacity) of Existing Site B Landfill
With and Without Waste Transfer (Based on Current Waste Disposal Values)



Solid Waste Infrastructure Initiatives

Yard Waste Processing

- ➔ Maryland regulations regarding unlined rubble fills forced the County to close its rubble fill in September 2001. Final closure and capping of the rubble fill was completed in August 2006.
- ➔ The closed Rubble fill site is being used to expand the County's yard waste processing operations.
- ➔ The design and construction of a yard waste processing site will allow the expansion of existing yard waste operations and additional composting operations.

Single Stream Recycling Options



- ➔ The DUSWM included single stream recycling services in its waste disposal contract with Waste Management.
- ➔ Frederick County's single stream recycling opportunities, once the transfer station construction is completed, may help keep residential recycling program costs down and offer new commercial (Single Stream) recycling opportunities.

Solid Waste Issues

- ⇒ The County's voluntary recycling rates are higher than some other communities with mandatory recycling programs.
- ⇒ The ability to implement an effective program of pay as you throw or mandatory recycling requires the County to become more involved in the collection of all waste within in the County.
- ⇒ The ability to issue exclusive franchises for the collection of solid waste within the County, is considered the best approach to address these concepts.

Long-term Solid Waste Initiatives

- In March 2005 the County, through its membership in the NMWDA secured the services of R.W. Beck to complete a comprehensive study on the County's waste management options. The scope of the report included but was not limited to the following elements:
- Alternative recycling strategies for the County's consideration.
- Estimates of current and future solid waste generation.
- Development of projected operating results of the system for both a six-year period from 2005 through 2010 and a 20-year period 2011 through 2031.
- Review alternative municipal solid waste management disposal strategies for that portion of the solid waste which is not recycled, including:
 - Long haul out of the County
 - Construction of a commercially demonstrated waste-to-energy facility.
 - Construction and operation of a organics composting facility and a municipal solid waste composting facility.
 - Identification of alternative strategies for the funding of solid waste management services.

Long Term Solid Waste Infrastructure Initiatives

Long-term Solid Waste Initiatives

- ➔ The BoCC decided to fully explore R.W. Beck's recommendations regarding the Waste to Energy disposal alternatives.
- ➔ On February 16, 2006 the BoCC adopted Resolution 06-05 Waste To Energy Disposal Facility, directing the DUSWM and the NMWDA to pursue full service DBO proposals for a 900 TPD local and 1500 TPD regional WTE facility.
- ➔ In accordance with the BoCC's resolution the DUSWM and the NMWDA pre-qualified full service WTE providers and in August 2006 issued a Request For Proposals (RFP) for the WTE project.
- ➔ The detailed proposals were received on April 20, 2007.
- ➔ The evaluation of the proposals is complete and will be presented to the BoCC in October of this year.



Long-term Solid Waste Initiatives

To be in the best position to evaluate the full service WTE proposals, staff from the NMWDA, HDR Engineers and the County participated in a tour of several European waste disposal facilities, including Refuse Derived Fuel and Mass Burn WTE facilities.

Long-term Solid Waste Initiatives



HVC Groep wte facility in Holland

Waste To Energy Alternative

- ➔ Although there have been many expansions of US WTE facilities, it has been more than 10 years since a brand new WTE facility project has been developed in the US.
- ➔ To better understand the use of WTE technologies, in March 2007, the County participated in a European solid waste management technology tour.
- ➔ The European technology tour allowed the County and NMWDA staff to review the latest in WTE technology.

Long-term Solid Waste Initiatives

- ➔ The tour also provided staff with the opportunity to meet with several major European Waste Management Associations
- ➔ Staff also visited several WTE facilities, where major facility expansions and new facilities are being constructed.
- ➔ This allowed NMWDA and DUSWM staff to directly compare current European WTE disposal technology to recent past US practice.



RDF Processing Facility at Herhoff in
Rennerod Germany

Isseanne WTE Under Construction in Paris



Isseanne WTE Under Construction in Paris



New ultra modern 3000 TPD WTE facility under construction along the River Seine



This brand new WTE facility in Paris is about a mile and half downstream of the Eiffel Tower.



Long-term Solid Waste Initiatives



Mass Burn WTE Facility, ASM Brescia
Brescia, Italy

- ➔ County Commissioner David Gray also participated in the Technology Tour, ensuring that both the County's technical and political staff are in the best position to review and understand the full service WTE proposals submitted to the County.
- ➔ All seven of the Counties visited take an integrated approach to waste management, relying heavily on recycling and energy recovery through thermal treatment (WTE).

Solid Waste Issues

➡ Immediate Issues Facing the County

- Sustaining the solid waste enterprise
 - Tipping fee was increased for FY 2008 and FY 2009.
 - Continue operation of solid waste program without general fund subsidies.
- Preserving current service levels and expanding recycling programs.
 - Transfer/processing facility construction which will provide single-stream recycling options.
 - Pursue Solid Waste Collection Franchise Legislation.
- Selection of Long-term waste disposal option with a emphasis on an integrated waste management strategy.
 - Consideration of WTE full service proposals.

The image features a landscape with a dark, misty foreground and a lighter, hazy background. The word "Questions?" is centered in the middle of the image in a bold, yellow font with a black outline.

Questions?